ABSTRACT

In a magnet brush type developing method of the present invention, at least one position where brush chains formed by magnetic carrier grains rise exists in a portion where an electric field formed between a facing zone where an image carrier and a developer carrier face each other has a strength E (V/m) expressed as:

$$E \geq |(A \cdot \rho_T \cdot d \cdot R) / (3B^{1/2} \cdot \varepsilon^0 \cdot V_{SL})|$$

where B is representative of $Tc \cdot D^3 \cdot \rho_c / (100 - T_c) \cdot d^3 \cdot \rho_T$, A denotes a mean amount of charge (μC/kg) deposited on toner grains, Tc denotes the content of the toner grains (wt%), *d* denotes the mean grain size (m) of the toner grains, D denotes the mean grain size (m) of the carrier grains, ρ_T denotes the specific weight (kg/m^3) of the toner grains, ρ_c denotes the specific gravity (kg/m^3) of the carrier grains, ε_o is 8.854×10^{-12} (F/m), R denotes the diameter of the developer carrier, and V_{SL} denotes the linear velocity of the carrier grains.